

# FIRE-ARSON INVESTIGATOR



Approved and Adopted by the  
Office of State Fire Marshal



Recommended for adoption by the  
Statewide Training and Education  
Advisory Committee and the  
State Board of Fire Services

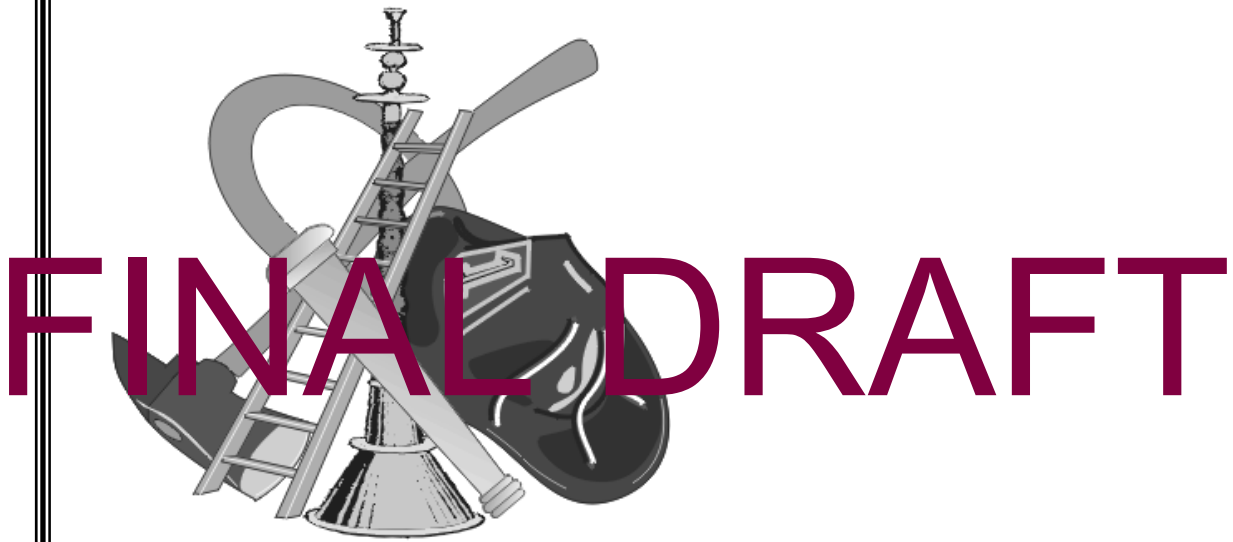
## CERTIFICATION TRAINING STANDARDS

### 2009 EDITION



# **FIRE-ARSON INVESTIGATOR**

## **CERTIFICATION TRAINING STANDARDS**



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## State Fire Training

### Mission Statement

The mission of State Fire Training is to enable the California fire service to safely protect life and property through education, training, and certification.

### California Fire Service Training and Education System

The California Fire Service Training and Education System (CFSTES) was established to provide a single statewide focus for fire service training in California. CFSTES is a composite of all the elements that contribute to the development, delivery, and administration of training for the California Fire Service. The authority for the central coordination of this effort is vested in the Training Division of the California State Fire Marshal's Office with oversight provided by the State Board of Fire Services.

The role of CFSTES is one of facilitating, coordinating, and assisting in the development and implementation of standards and certification for the California fire service. CFSTES manages the California Fire Academy System by providing standardized curriculum and tests; accredited courses leading to certification; approved standardized training programs for local and regional delivery; administering the certification system; and publishing Career Development Guides, Instructors Guides, Student Manuals, Student Supplements, and other related support materials.

This system is as successful and effective as the people involved in it are. It is a fire service system developed by the fire service for the fire service... and we believe it is the best one in the country.

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### Acknowledgments

State Fire Training coordinated the development of the material contained in this guide. Before its publication, the Statewide Training and Education Advisory Committee (STEAC) and the State Board of Fire Services (SBFS) recommended this guide for adoption by the State Fire Marshal (SFM). This guide is appropriate for fire service personnel and for personnel in related occupations that are pursuing State Fire Training certification.

<b>Del Walters</b> Director of CAL FIRE	
<b>Kate Dargan</b> State Fire Marshal	<b>Tonya Hoover</b> Assistant State Fire Marshal
<b>Mike Richwine</b> Chief, State Fire Training	<b>Ron Coleman</b> Chair, STEAC

Special acknowledgement and thanks are extended to the following member of State Fire Training for her diligent efforts and contributions that made the final publication of this document possible.

<p><b>Alicia Hamilton</b> Fire Service Training Specialist</p>
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The material contained in this document was compiled and organized through the cooperative effort of numerous professionals within, and associated with, the California fire service. We gratefully acknowledge the individuals who served as principal developers for this document.

<b>Jim Allen</b> Allan Hancock College
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<b>Joe Konefal, Team Leader</b> CAL FIRE/SFM Arson and Bomb Unit (Retired)
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*"We gratefully acknowledge the hard work and accomplishments of those before us who built the solid foundation on which this program continues to grow."*



## Introduction

A Certification Training Standards (CTS) Guide is developed for each rank in the fire service – fire fighter, driver/operator, fire instructor, fire officer, etc. The CTS Guide lists every responsibility a person is expected to complete and a student performance goal that includes a measurable minimum performance standard. In addition, a comprehensive list of reference resources is provided. The CTS Guide has several valuable uses:

1. It is the foundation for the certification programs recommended for adoption by the SBFS. Any certification program must be based upon job-related knowledge and measurable objectives.
2. It provides measurable minimum performance standards. The validity and reliability of fire service entrance and promotional examinations can be more easily defended when such measurable standards are utilized.

These performance standards will need to be augmented by additional training in order to master the knowledge and skills needed for specialized operations.

3. It lists a variety of reference resources that may be studied in order to enhance job performance. A student can be confident that any eventual testing will be based upon the authoritative resources being studied. It is this fostering of individual confidence and initiative, which may become the most important accomplishment of the CTS Guide.

### **Format**

The following is the standardized format for a Certification Training Standards Guide.

### **Title**

The title should be written as concise as possible and provides the first indication that the standard is cognitive, psychomotor, or both. This indication is accomplished by using corresponding verbs. A task title might be, "Describe and Demonstrate the Use of Ropes." This shows that there are both cognitive and psychomotor requirements.

### **Authority**

Each CTS is keyed, when possible, to a subsection of the appropriate National Fire Protection Association (NFPA) Professional Qualifications. Because of this correlation between the CTS Guide and the NFPA standard, it can be said that each fire service position in California's certification system meets or exceeds the corresponding NFPA standard. In order to achieve this and satisfy the desired performance for California fire service personnel, a standard that the NFPA has designated for a particular level (Fire Officer V for example) may be included in California's Fire Officer requirements. Moreover, in some instances, because of repetition in the NFPA standard, several subsections might be cited for a single CTS.

In other instances, California may have a requirement that has been overlooked or neglected by the NFPA. When there is no NFPA subsection in the standard to cite, the authority requiring the standard, or a performance within the standard, is listed. In these cases, the authority cited is the State Fire Marshal and the requirements are printed in *italics*.

## Level

Two levels of learning are used in a CTS Guide. These levels are defined as:

### Level I: Knowledge

The ability to recall or recognition of previously learned material (facts, theories, etc.) in essentially the same form as taught. Students will be able to name, match, list, and identify a concept, principle, or object.

### Level II: Comprehension

The ability to use information within a limited context, use abstractions in particular situations, and break information into its parts to clarify relationships. Students will be able to describe and demonstrate the use of an identified concept, principle, or object.

## Performance Goal

The heart of the CTS Guide is contained in the performance goals. They attempt to specifically measure what a student knows or is capable of doing at the end of the instructional period by defining the amount of technical knowledge required or the skill of the psychomotor performance. The performance goal provides the instructor or testing agency with these guidelines.

1. What the student should be given to accomplish the CTS.
2. What the student should be able to accomplish.
3. How well the student should perform.
4. The authoritative reference resources being employed.

## Given

Technically, the performance goal differs from a student behavioral objective (in a lesson plan) because the "Given" or "Condition" sections are not the same. In a behavioral objective, the "Condition" contains what the student is given at the time of testing. In a performance goal, the "Given" contains a block of information necessary for a student to study and accomplish the corresponding performance.

## Performance

The "Performance" section of the performance goal lists, in detail, what a student must accomplish in order to satisfy the CTS. Three operative verbs are used in this section:

1. **Identify** indicates a **Level I** cognitive response (written or verbal) is required from the student.
2. **Describe** indicates a **Level II** cognitive response (written or verbal) is required from the student.
3. **Demonstrate** indicates a physical response is required so that the student's psychomotor skills or cognitive product can be judged, and is not necessarily tied to a level of learning.

To cut down on the sheer size of the CTS Guide, the many details included in the "Performance" section precluded the necessity of writing a series of task analyses on closely related subjects. For example, when talking the chemistry of combustion, it became possible to write:



1. Describe the chemistry of combustion, which ***shall*** include:
  - Ignition
  - Products of combustion
  - Heat sources
  - Fuel types
  - Fire triangle

Generally, but not always, each numbered item in the "Performance" is a job. Sometimes, however, many jobs are included in a single numbered item. In this case, each bullet represents a single job.

### **Standard**

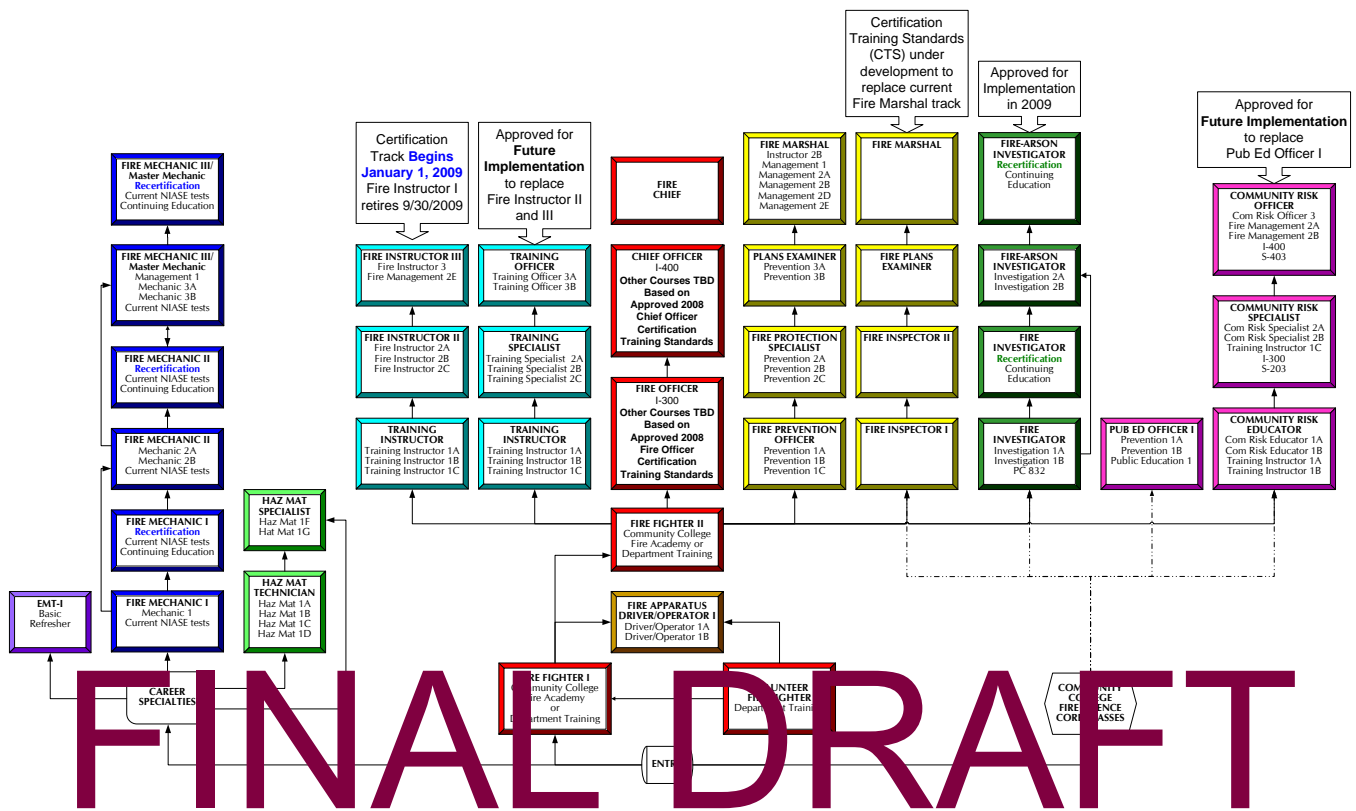
The "Standard" section of the performance goal identifies how the student will be evaluated. For cognitive requirements, the standard will be with a minimum 80% accuracy on a written exam. For psychomotor requirements, the standard will be by completing all operations on a performance test. In the cases where the CTS has both psychomotor and cognitive performance goals, the standard will list both the written exam and a performance test.

### **Learning Resources**

A list of available authoritative reference resources supporting the performance goal.

**FINAL DRAFT**

# Certification Tracks



The above information only identifies the educational requirements for each level of certification. In addition to the courses listed above, each level of certification requires a minimum experience in the subject area and/or certification prerequisites. For complete information, refer to the State Fire Training Procedures Manual. - - - - - line = alternate prerequisite available

**FIRE INVESTIGATOR****#1. Describe The Tracking Of Arson Incidents And The Overall Fire Situation In The United States**

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Section 4.1.4

LEVEL: II

PERFORMANCE GOAL

***GIVEN:***

1. The U.S. Fire Administration's current report on fire statistics

***PERFORMANCE:***

1. Describe the percentage of arson fires as compared to the total fire response picture
2. Describe the problems that may affect the gathering of accurate data

***STANDARD:***

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

REFERENCE RESOURCES

- NFPA 921 Guide to Fire and Explosive Investigations, NFPA

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**#2. Identify The Terms And Definitions Relevant To The Fire Investigator**

AUTHORITY: State Fire Marshal

LEVEL: I

PERFORMANCE GOAL

**GIVEN:**

1. A summary of the terms commonly used in fire investigation

**PERFORMANCE:**

1. Identify the definition of terms that are commonly used in fire investigation

**STANDARD:**

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

REFERENCE RESOURCES

- ☐ NFPA 921: Guide to Fire and Explosive Investigations, NFPA

# FINAL DRAFT

### #3. Describe The Organization And Operation Of The Investigative Team Within An Incident Management System

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Section 4.1.6

LEVEL: II

#### PERFORMANCE GOAL

##### ***GIVEN:***

1. A summary of the role of the fire investigator
2. A summary of the role of the investigative team
3. A summary of fire investigation within an incident management system

##### ***PERFORMANCE:***

1. Describe the role of the fire investigator as part of the investigative team within an incident management system

##### ***STANDARD:***

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

#### REFERENCE RESOURCES

- NFPA 921 Guide to Fire and Explosion Investigations, NFPA

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#### **#4. Describe All Elements Of The Scientific Method As The Operating Analytical Process Throughout The Investigation**

**AUTHORITY:** NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Section 4.1.2

**LEVEL:** II

##### **PERFORMANCE GOAL**

##### ***GIVEN:***

1. A summary of the scientific method used in conducting a fire investigation
2. A summary of the need to conduct a fire investigation
3. A summary of the need to define the problem when dealing with an investigative plan
4. A summary of data collection at the fire scene
5. A summary of proper data analysis (inductive reasoning)
6. A summary of developing a working hypothesis based upon the data analysis
7. A summary of testing the working hypothesis (deductive reasoning)
8. A summary of selecting a final hypothesis (conclusion or decision)

##### ***PERFORMANCE:***

1. Describe the use of the scientific method in conducting a fire investigation
2. Describe recognizing the need to conduct a fire investigation
3. Describe the need to define the problem when dealing with an investigative plan
4. Describe data collection at the fire scene
5. Describe proper data analysis (inductive reasoning)
6. Describe developing a working hypothesis based upon the data analysis
7. Describe testing the working hypothesis (deductive reasoning)
8. Describe selecting a final hypothesis (conclusion or decision)

##### ***STANDARD:***

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

##### **REFERENCE RESOURCES**

- ❑ Forensic Fire Scene Reconstruction, David J. Icove & John D. DeHaan, Pearson Prentice Hall
- ❑ NFPA 921: Guide to Fire and Explosive Investigations, NFPA



## #5. Describe Fire Behavior

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Section 4.2.2(A), 4.2.3(A), 4.2.5(A), and the *State Fire Marshal*

LEVEL: II

### PERFORMANCE GOAL

#### **GIVEN:**

1. A summary of the chemistry of combustion
2. A summary of fire dynamics
3. *A summary of the classification of fire by fuel type*

#### **PERFORMANCE:**

1. Describe the chemistry of combustion, which at a minimum **shall** include:

- Fire triangle
- Fuel types
- Heat sources
- Ignition
- Products of combustion

2. Describe fire dynamics, which at a minimum **shall** include:

- Flashover
- Fuel loads
- Heat transfer
- Phases/stages of fire growth

3. *Describe the classification of fire by fuel type*

#### **STANDARD:**

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

### REFERENCE RESOURCES

- ☐ Forensic Fire Scene Reconstruction, David Icove and John DeHaan, Pearson Prentice Hall
- ☐ Kirk's Fire Investigation, John DeHaan, Pearson Prentice Hall
- ☐ NFPA 1033: Professional Qualifications for Fire Investigator, NFPA
- ☐ NFPA 921: Guide to Fire and Explosive Investigations, NFPA
- ☐ Principles of Fire Behavior, James G. Quintiere, Delmar

## #6. Describe The Legal Considerations That Regulate The Activities Of The Fire Investigator

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Sections 4.1.5 and 4.4.2(A)

LEVEL: II

### PERFORMANCE GOAL

#### **GIVEN:**

1. A summary of U.S. constitutional amendments relating to fire investigations
2. A summary of the constitution to conduct a fire investigation
3. A summary of the legal right of entry to conduct a fire investigation
4. A summary of obtaining consent to conduct a fire investigation
5. A summary of the description and use of exigent circumstances to enter the fire scene
6. A summary of the description of the inspection (administrative) warrant
7. A summary of the description and use of the search warrant
8. A summary of pretrial considerations in civil and criminal cases
9. A summary of testimonial evidence

#### **PERFORMANCE:**

1. Describe the statutory authority to enter and conduct a fire scene examination
2. Describe the legal issues of collection of evidence in accidental and incendiary fires
3. Describe the legal proceedings of a civil litigation and criminal case
4. Describe testifying as a fact witness and an expert witness

#### **STANDARD:**

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

### REFERENCE RESOURCES

- ☐ California Code of Civil Procedure, Sections 1822.15 through 1822.57
- ☐ California Fire Code, Section 104.2
- ☐ California Health and Safety Code, Section 13107
- ☐ California Public Resources Code, Section 4156A
- ☐ Locally adopted fire codes
- ☐ Michigan v Clifford, 464 U.S. 287 (1984)
- ☐ Michigan v Tyler, 436 U.S. 499 (1978)
- ☐ NFPA 921: Guide to Fire and Explosive Investigations, NFPA

## #7. Describe Federal, State, And Local Laws And Ordinances That Apply To Fire And Arson Investigation

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Sections 4.1.5

LEVEL: II

### PERFORMANCE GOAL

#### **GIVEN:**

1. A summary of the California Penal Code, Sections 450 through 457.1
2. A summary of the California Penal Code, Section 548
3. A summary of the California Insurance Code, Sections 1871 and 1872
4. A summary of the California Health and Safety Code, Sections 13000, 13001, and 13002
5. A summary of the California Penal Code, Sections 12301 through 12312
6. A summary of the California Penal Code, Section 830.37
7. A summary of the United States Code, Title 18, Chapter 40, 544(i)
8. A summary of People v Fry
9. A summary of People v Atkins

#### **PERFORMANCE:**

1. Describe arson laws
2. Describe reckless burning law
3. Describe insurance fraud laws
4. Describe the immunity sections of the Insurance Code
5. Describe the Health and Safety Code laws relating to fires
6. Describe destructive devices law
7. Describe the laws relating to arson unit investigators as peace officers
8. Describe the federal arson law
9. Describe arson as a general intent crime

#### **STANDARD:**

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

### REFERENCE RESOURCES

- ☐ California Health and Safety Code, Sections 13000, 13001, and 13002
- ☐ California Insurance Code, Sections 1871 and 1872
- ☐ California Penal Code, Sections 450 through 457.1, 548, 830.37, 12301-12312
- ☐ NFPA 921: Guide to Fire and Explosive Investigations, NFPA
- ☐ People v Atkins, 25 Cal.4th 76, 104 Cal.Rptr.2d 738; 18 P.3d 660 (2001)
- ☐ People v Fry, 19 Cal.App.4th 1334, 24 Cal.Rptr.2d 43 (1993)
- ☐ United States Code, Title 18, Chapter 40, 544(i)

## #8. Describe And Demonstrate The Techniques For Properly Documenting The Fire Scene

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Sections 4.2.7, 4.3.1, 4.3.2, 4.3.3, 4.6.2, and 4.7.1

LEVEL: II

### PERFORMANCE GOAL

#### ***GIVEN:***

1. A summary of the methods and techniques to record the investigation
2. A summary on taking and using photographs for documentation
3. A summary on note taking
4. A summary on diagramming and drawing the fire scene
5. A summary on developing and using reports for recording the investigation

#### ***PERFORMANCE:***

1. Describe accurately recording the investigation
2. Describe how photography is used to accurately record the investigation
3. Describe how investigator notes are used to accurately record the investigation
4. Describe the use of diagrams and drawings to accurately record the fire scene
5. Describe and demonstrate how to develop and use reports to accurately record the investigation, which at a minimum *shall* include:
  - The definition and purpose of a case report
  - The definition of a preliminary report and how it is used
  - The elements of both a narrative and category report
  - Writing a case report

#### ***STANDARD:***

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

### REFERENCE RESOURCES

- NFPA 921: Guide to Fire and Explosive Investigations, NFPA

## #9. Describe Fire Origin Determination

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Sections 4.2.2, 4.2.3, 4.2.4, 4.2.5, 4.2.6, and 4.2.7

LEVEL: II

### PERFORMANCE GOAL

#### ***GIVEN:***

1. A summary of the basic methodology of fire investigation
2. A summary of fire origin and how it relates to fire cause determination
3. A summary of fire department overhaul procedures and the relationship to fire cause determination
4. A summary of procedures for fire origin determination

#### ***PERFORMANCE:***

1. Describe the basic methodology of fire investigation
2. Describe the fire origin and how it relates to fire cause determination
3. Describe fire department overhaul procedures and the relationship to fire cause determination
4. Describe scene examination procedures for fire origin determination
5. Describe the examination of the exterior of the fire scene
6. Describe the examination of the interior of the fire scene
7. Describe the analysis of fire pattern indicators in fire origin determination
8. Describe flashover in the development of fire pattern indicators
9. Describe the use of glass indicators in fire origin determination
10. Describe the use of fire damage to structural elements in fire origin determination
11. Describe the use of char depth measurements in fire origin determination
12. Describe the use of reconstruction of the fire scene in fire origin determination

#### ***STANDARD:***

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

### REFERENCE RESOURCES

- ❑ Kirk's Fire Investigation, John DeHaan, Pearson Prentice Hall
- ❑ NFPA 921: Guide to Fire and Explosive Investigations, NFPA

## #10. Describe Ignition

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Sections 4.2.3(B), 4.2.4(A), and 4.2.6

LEVEL: II

### PERFORMANCE GOAL

#### **GIVEN:**

1. A summary of the relationship between fire origin and ignition
2. A summary of the relationship between material first ignited and ignition
3. A summary of ignition sources
4. A summary of the ignition process
5. A summary of ignition of liquids and gases
6. A summary of ignition of solids
7. A summary of negative proof

#### **PERFORMANCE:**

1. Describe fire origin and how it relates to ignition
2. Describe which fuel and ignition sources will and will not lead to ignition and why
3. Describe the three heat components of the ignition process
4. Describe heat generation
5. Describe heat transmission
6. Describe heating
7. Describe self-heating
8. Describe the four fire types relative to ignition
9. Describe the ignition of liquids and gases
10. Describe the ignition of solids
11. Describe negative proof

#### **STANDARD:**

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

### REFERENCE RESOURCES

- ☐ Fire Protection Guide to Hazardous Materials, NFPA 325
- ☐ Ignition Handbook, Vytennis Babrauskus, Fire Science Publishers
- ☐ Kirk's Fire Investigation, John DeHaan, Pearson Prentice Hall
- ☐ NFPA 921: Guide to Fire and Explosive Investigations, NFPA



**#11. Describe Accidental Ignition Sources**

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Section 4.2.6

LEVEL: II

PERFORMANCE GOAL**GIVEN:**

1. A summary of procedures for determining accidental fires
2. A summary of accidental fire causes

**PERFORMANCE:**

1. Describe heating equipment as a cause of fire
2. Describe cooking equipment as a cause of fire
3. Describe careless smoking as a cause of fire
4. Describe trash burning as a cause of fire
5. Describe misuse of ignitable liquid as a cause of fire
6. Describe open flames/sparks as a cause of fire
7. Describe spontaneous heating as a cause of fire
8. Describe low temperature ignition as a cause of fire
9. Describe acts of nature as a cause of fires

**STANDARD:**

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

REFERENCE RESOURCES

- ☐ Kirk's Fire Investigation, John DeHaan, Pearson Prentice Hall
- ☐ NFPA 921: Guide to Fire and Explosive Investigations, NFPA

## #12. Describe Electrical Ignition Sources

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Section 4.2.6

LEVEL: II

### PERFORMANCE GOAL

#### **GIVEN:**

1. A summary of the relationship between fire origin and fire cause
2. A summary of the relationship between material first ignited and heat source
3. A summary of procedures for determining electrical ignition sources

#### **PERFORMANCE:**

1. Describe the fire origin and how it relates to fire cause determination
2. Describe home and commercial electrical protective devices
3. Describe the distribution panel
4. Describe grounding
5. Describe over current protection
6. Describe aluminum wiring and accidental fires
7. Describe investigative assistance
8. Describe examination procedure of fires of electrical origin
9. Describe the wiring at the area of origin
10. Describe evaluating damaged copper wiring
11. Describe investigating electrical appliances/equipment as a fire cause
12. Describe static electricity as a fire cause

#### **STANDARD:**

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

### REFERENCE RESOURCES

- Kirk's Fire Investigation, John DeHaan, Pearson Prentice Hall
- NFPA 921: Guide to Fire and Explosive Investigations, NFPA

### #13. Describe Incendiary Fire Indicators

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Sections 4.2.1, 4.2.2, 4.2.3, 4.2.4, 4.2.5, 4.2.6, 4.2.7, and 4.6.4

LEVEL: II

#### PERFORMANCE GOAL

##### **GIVEN:**

1. A summary of the relationship between fire origin and fire cause
2. A summary of the relationship between material first ignited and heat source
3. A summary of procedures for determining indicators of incendiary fires

##### **PERFORMANCE:**

1. Describe the fire origin and how it relates to fire cause determination
2. Describe multiple points of origin as an incendiary indicator
3. Describe the use of trailers in incendiary fires
4. Describe the presence of ignitable liquids as an incendiary indicator
5. Describe common equipment and/or appliances used to start incendiary fires
6. Describe determining content irregularities and structural damage as an incendiary indicator
7. Describe how fire location and damage is an indicator of an incendiary fire
8. Describe using the process of elimination to establish fire cause
9. Describe the proper documentation of incendiary indicators to prove fire cause

##### **STANDARD:**

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

#### REFERENCE RESOURCES

- ❑ Kirk's Fire Investigation, John DeHaan, Pearson Prentice Hall
- ❑ NFPA 921: Guide to Fire and Explosive Investigations, NFPA

**#14. Describe The Construction, Use, And Mechanics Of An Incendiary Device**

AUTHORITY: State Fire Marshal

LEVEL: II

PERFORMANCE GOAL

**GIVEN:**

1. A summary of the definition of an incendiary device
2. A summary of the different types of delay mechanisms utilized with an incendiary device

**PERFORMANCE:**

1. Define an incendiary device
2. Describe the readily available material to construct an incendiary device
3. Describe common examples of electrical delay incendiary devices and their components
4. Describe common examples of mechanical delay incendiary devices and their components
5. Describe common examples of chemical delay incendiary devices and their components
6. Describe incendiary devices that are designed to be thrown

**STANDARD:**

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

REFERENCE RESOURCES

- ❑ Kirk's Fire Investigation, John DeHaan, Pearson Prentice Hall
- ❑ NFPA 921: Guide to Fire and Explosive Investigations, NFPA

**#15. Describe Structural Fire Investigation**

**AUTHORITY:** NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Sections 4.1.2, 4.1.3, 4.1.5, 4.1.6, 4.2.1, 4.2.2, 4.2.3, 4.2.4, 4.2.5, 4.2.8, 4.5.1,  
4.6.3, and 4.6.5

**LEVEL:** II

**PERFORMANCE GOAL****GIVEN:**

1. A summary of how to determine the cause and origin of structural fires
2. A summary of tools used to conduct structural investigations
3. A summary of basic information to be recorded at incident scene
4. A summary on securing the incident scene
5. A summary on the responsibility in fatal fires
6. A summary on exterior and interior examinations of the structure
7. A summary on interviewing witnesses

**PERFORMANCE:**

1. Describe the protocol at scene (chain of command)
2. Describe the tools used in the scene investigation
3. Describe the conditions of the facility and surrounding facts
4. Describe securing of the incident scene
5. Describe the condition of building before the fire
6. Describe the alarm systems present
7. Describe the people, pets, clothing, furniture, or other items missing from scene
8. Describe the information obtained from witnesses, victims, suspects, neighbors, and bystanders

**STANDARD:**

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

**REFERENCE RESOURCES**

- Kirk's Fire Investigation, John DeHaan, Pearson Prentice Hall
- NFPA 921: Guide to Fire and Explosive Investigations, NFPA

## #16. Describe Vehicle Fire Investigation

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Sections 4.1.2, 4.1.3, 4.1.5, 4.1.6, 4.2.1, 4.2.2, 4.2.3, 4.2.4, 4.2.5, 4.5.1, 4.6.3,  
and 4.6.5

LEVEL: II

### PERFORMANCE GOAL

#### **GIVEN:**

1. A summary of accidental vehicle fires
2. A summary of vehicles subject to arson
3. A summary of the fire scene examination
4. A summary of vehicle fires other than automotive
5. A summary of vehicle information (ownership and registration)

#### **PERFORMANCE:**

1. Describe types of accidental fire causes relating to vehicles
2. Describe the circumstances involved prevalent to arson fires in vehicles
3. Describe the fire investigation procedures
4. Describe the importance of the vehicle identification number (VIN), registration information, and financial condition of the vehicle

#### **STANDARD:**

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

### REFERENCE RESOURCES

- ❑ Kirk's Fire Investigation, John DeHaan, Pearson Prentice Hall
- ❑ NFPA 921: Guide to Fire and Explosive Investigations, NFPA



## #17. Describe Wildland Fire Investigation

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Sections 4.1.2, 4.1.3, 4.1.5, 4.1.6, 4.2.1, 4.2.2, 4.2.3, 4.2.4, 4.2.5, 4.5.1, 4.6.3,  
and 4.6.5

LEVEL: II

### PERFORMANCE GOAL

#### **GIVEN:**

1. A summary of accidental causes for wildland fires
2. A summary of arson causes for wildland fires
3. A summary of the fire scene examination
4. A summary of follow-up investigation procedures
5. A summary of assistance from other agencies

#### **PERFORMANCE:**

1. Describe the twelve most prevalent accidental fire causes
2. Describe various fire patterns that indicate the crime of arson occurred
3. Describe the circumstance and methodology used in conducting a wildland fire scene examination
4. Describe the procedure used in conducting the follow-up investigation
5. Describe and identify other agencies or experts that can assist in a wildland scene examination

#### **STANDARD:**

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

### REFERENCE RESOURCES

- ❑ Kirk's Fire Investigation, John DeHaan, Pearson Prentice Hall
- ❑ NFPA 921: Guide to Fire and Explosive Investigations, NFPA

**#18. Describe Explosions**

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Section 4.2.9

LEVEL: II

PERFORMANCE GOAL***GIVEN:***

1. A summary of the basics types of explosions
2. A summary of the nature of explosions
3. A summary of the safety involved in working with explosives or explosion scenes

***PERFORMANCE:***

1. Describe the most common circumstances involving explosions
2. Describe deflagration verses detonation
3. Describe the safety issues involving distance perimeter, secondary devices, and scene preservation

***STANDARD:***

By completing all assignments and activities, and passing all written tests and exercises with a minimum of 80% accuracy

REFERENCE RESOURCES

- ☐ Kirk's Fire Investigation, John DeHaan, Pearson Prentice Hall
- ☐ NFPA 921: Guide to Fire and Explosive Investigations, NFPA

## #19. Describe The Understanding Of Motive Or The Reason For The Criminal Fire

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Section 4.6.4

LEVEL: II

### PERFORMANCE GOAL

#### **GIVEN:**

1. A summary of the definition of motive
2. A summary of the definition of intent
3. A summary of how an investigator utilizes motive in an investigation
4. A summary of the different types of motivations associated with arsonists

#### **PERFORMANCE:**

1. Define motive
2. Define intent
3. Describe how an investigator utilizes motive in an investigation
4. Describe the different types of arsonists based on their motivation

#### **STANDARD:**

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

### REFERENCE RESOURCES

- ❑ Kirk's Fire Investigation, John DeHaan, Pearson Prentice Hall
- ❑ NFPA 921: Guide to Fire and Explosive Investigations, NFPA
- ❑ Serial Arsonist Investigative Considerations, Allen D. Sapp, Timothy G. Huff, G. P. (Gus) Gary, and David J. Icove of the FBI National Center for the Analysis of Violent Crime

**#20. Describe Considerations For Conducting A Safe Fire Scene Investigation**

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Section 4.1.3

LEVEL: II

PERFORMANCE GOAL***GIVEN:***

1. A summary of safety concerns affecting fire investigators
2. A summary of fire scene hazards
3. A summary of the hazards associated with fatigue
4. A summary of safety issues associated with fire suppression
5. A summary of safety concerns associated with structural stability
6. A summary of safety concerns associated with utilities
7. A summary of the hazards associated with standing water
8. A summary of the safety concerns associated with bystanders and witnesses
9. A summary of the hazards of possible toxic atmospheres at a fire investigation
10. A summary of the hazards associated with criminal or terrorist acts
11. A summary of the hazards of transfer of toxic or dangerous materials transferred to tools, equipment, or clothing
12. A summary of the hazards associated with post-fire investigation duties

***PERFORMANCE:***

1. Describe the general safety concerns of the fire investigation before, during, and after the task has been accomplished, which at a minimum ***shall*** include:
  - Assistance
  - Safety equipment
2. Describe fire scene hazards, which at a minimum ***shall*** include:
  - Biological
  - Chemical
  - Radiological
3. Describe the hazards associated with fatigue and the need for periodic rest, fluid replacement, and nourishment
4. Describe the safety concerns of fire suppression as it relates to the investigation, which at a minimum ***shall*** include:
  - Awareness of suppression personnel
  - Rekindle

5. Describe the safety hazards of an unstable structure, which at a minimum **shall** include:
  - Compromised elements
  - Holes in the floor
6. Describe the hazards associated with utilities during a fire investigation
7. Describe why standing water is a safety hazard during an investigation, which at a minimum **shall** include:
  - Can hide hazards
  - Conduct electricity
8. Describe how barricades provide safety for unauthorized persons at the fire scene
9. Describe the types of toxic atmospheres that may be present at a fire scene, which at a minimum **shall** include:
  - Asbestos
  - Carbon monoxide
  - Products of combustion
10. Describe the hazards to the investigator from criminal or terrorist acts, which at a minimum **shall** include:
  - Biological or radiological terrorism
  - Residual chemicals
  - Secondary devices
11. Describe the technique used to prevent the transfer of dangerous or toxic materials from the fire scene
12. Describe the hazards associated with post-fire investigation duties, which at a minimum **shall** include:
  - Handling contaminated equipment

**STANDARD:**

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

**REFERENCE RESOURCES**

- NFPA 921: Guide to Fire and Explosive Investigations, NFPA

**#21. Describe The Methodology For Conducting A Post-blast Scene Investigation**

AUTHORITY: State Fire Marshal

LEVEL: II

PERFORMANCE GOAL

**GIVEN:**

1. A summary of the roles and responsibilities of various investigative agencies involved in a post-blast investigation
2. A summary of dangers inherent at post-blast scenes
3. A summary of the different types of explosives
4. A summary of the effects of an explosion
5. A summary of the methods of initiation of IEDs (improvised explosive devices)
6. A summary of the procedure for conducting initial blast assessment
7. A summary of the preliminary search procedures at a post-blast scene
8. A summary of the questions that must be answered during the examination of the post-blast scene

**PERFORMANCE:**

1. Describe the roles and responsibilities of various investigative agencies involved in a post-blast investigation
2. Describe dangers inherent at post-blast scenes
3. Describe the different types of explosives
4. Describe the effects of an explosion
5. Describe the methods of initiation of IEDs (improvised explosive devices)
6. Describe the procedure for conducting initial blast assessment
7. Describe the preliminary search procedures at a post-blast scene
8. Describe the questions that must be answered during the examination of the post-blast scene
9. Describe what evidence can be recovered from the victims at a post-blast scene

**STANDARD:**

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

REFERENCE RESOURCES

- NFPA 921: Guide to Fire and Explosive Investigations, NFPA

**#22. Describe The Proper Methods For Recognizing Evidence**

**AUTHORITY:** NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Sections 4.2.1, 4.2.2, 4.2.3, 4.2.6, 4.2.9, 4.3.1, 4.4.1, 4.4.2, 4.4.3, 4.4.4, 4.4.5,  
and 4.6.4

**LEVEL:** II

**PERFORMANCE GOAL*****GIVEN:***

1. A summary of the proper methods for recognizing evidence

***PERFORMANCE:***

1. Describe the definition of evidence
2. Describe the "theory of transfer"
3. Describe the uses of evidence
4. Describe the types of evidence
5. Describe the roles of evidence
6. Describe the rules of evidence
7. Describe the threat of "cross-contamination" and its potential effect on a criminal investigation
8. Describe the proper method of documenting evidence
9. Describe the proper method of marking evidence
10. Describe the proper method of collecting various types of evidence
11. Describe the proper types of containers for collecting various types of evidence
12. Describe the chain of custody and its importance to the validity of evidence
13. Describe the proper storage methods for evidence
14. Describe the time considerations for the retention of evidence
15. Describe the laboratory services available to the fire investigator

***STANDARD:***

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

**REFERENCE RESOURCES**

- ☐ NFPA 921: Guide to Fire and Explosive Investigations, NFPA
- ☐ Physical Evidence Bulletins, California Criminalistics Institute, CA Dept. of Justice

## #23. Describe Trace Evidence

AUTHORITY: State Fire Marshal

LEVEL: II

### PERFORMANCE GOAL

#### **GIVEN:**

1. A summary of trace evidence types
2. A summary of identifying trace evidence
3. A summary of collecting trace evidence
4. A summary of preserving trace evidence
5. A summary of testing trace evidence

#### **PERFORMANCE:**

1. Describe and demonstrate identifying and collecting fingerprint evidence
2. Describe identifying and collecting tool mark evidence
3. Describe and demonstrate collecting footprint and tire track evidence
4. Describe identifying and collecting fibers and hairs trace evidence
5. Describe identifying and collecting blood and body fluid trace evidence
6. Describe identifying and collecting soil samples
7. Describe identifying and collecting glass particles
8. Describe identifying and collecting firearms
9. Describe and demonstrate identifying and collecting volatile flammables
10. Describe identifying and collecting explosive residue trace evidence
11. Describe identifying and collecting paint trace evidence

#### **STANDARD:**

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

### REFERENCE RESOURCES

- ☐ Kirk's Fire Investigation, John DeHaan, Pearson Prentice Hall
- ☐ NFPA 921: Guide to Fire and Explosive Investigations, NFPA
- ☐ Physical Evidence Bulletins, California Criminalistics Institute, CA Dept. of Justice



## #24. Describe Interviewing Techniques

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Sections 4.5.1 and 4.5.2

LEVEL: II

### PERFORMANCE GOAL

#### ***GIVEN:***

1. The legal definitions of “interview” and “interrogation”
2. A summary of the Miranda rule
3. An overall summary of interviewing purpose, situational awareness, and body language
4. A brief summary of interviewing techniques
5. A description of the cognitive interview technique
6. A brief summary on the techniques for interviewing children
7. An introduction to interrogation techniques
8. Case studies related to interviewing and interrogating

#### ***PERFORMANCE:***

1. Describe the difference between interviewing and interrogating
2. Describe the Miranda rule and its application for fire investigators
3. Describe the proper settings for interviewing versus interrogation
4. Describe the proper interview technique for the situation
5. Describe the difference between interview and interrogation
6. Describe the use of the confrontational interrogation with its benefits and drawbacks

#### ***STANDARD:***

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

### REFERENCE RESOURCES

- NFPA 921: Guide to Fire and Explosive Investigations, NFPA

**#25. Describe The Important Elements Of Juvenile Law**

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Sections 4.5.1, 4.5.2, and 4.5.3

LEVEL: II

PERFORMANCE GOAL***GIVEN:***

1. A description of juvenile law in California
2. A brief summary of interviewing juveniles

***PERFORMANCE:***

1. Describe the pertinent laws relating to juveniles
2. Describe methods used before and during interviewing of juveniles

***STANDARD:***

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

REFERENCE RESOURCES

- ☐ California Welfare and Institutions Code, Sections 300 through 324.5 and sections 600 through 611

FINAL DRAFT

**#26. Describe Fire Scene Practices At A Fatal Fire**

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Section 4.4.1

LEVEL: II

PERFORMANCE GOAL

***GIVEN:***

1. A description of investigative practices when conducting a fatal or serious injury fire scene investigation
2. The roles of the investigative team members and their responsibilities

***PERFORMANCE:***

1. Describe the investigative team members and their legal roles during a fatal or serious injury fire scene examination

***STANDARD:***

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

REFERENCE RESOURCES

- NFPA 921: Guide to Fire and Explosive Investigations, NFPA

FINAL DRAFT

**#27. Describe The Investigation Practices Of The Fatal Fire**

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Section 4.4.1

LEVEL: II

PERFORMANCE GOAL***GIVEN:***

1. A description of the role of heat in a fatal fire
2. A description of the commonly found fire gases and their effects on the human body
3. A summary of the rule of nines
4. A summary of the mode/manner of death
5. A description of fire scene examination procedures
6. A summary of post mortem examination findings

***PERFORMANCE:***

1. Describe products of combustion and their relationship to injury and death
2. Describe the use of the rule of nines in analysis of fire patterns on victims
3. Describe the differences of a death from fire cases versus medical cases
4. Describe the correlation of the post mortem examination with the fire scene findings
5. Describe the use of medical and other forensic experts in the fatal investigation

***STANDARD:***

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

REFERENCE RESOURCES

- ☐ NFPA 921: Guide to Fire and Explosive Investigations, NFPA

**#28. Describe And Demonstrate Insurance Information For The Fire Investigator**

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Section 4.6.1

LEVEL: II

PERFORMANCE GOAL**GIVEN:**

1. A summary of the basic information found in an insurance policy
2. A summary of the insurance company personnel involved in a claim
3. A summary of the responsibilities of an adjuster
4. A summary of the type of investigative procedure based on insurance coverage
5. A summary of the arson immunity statute

**PERFORMANCE:**

1. Describe the basic information found in an insurance policy
2. Describe the insurance company personnel involved in a fire insurance claim
3. Describe the responsibilities of an insurance adjuster
4. Describe the investigative procedure based on insurance coverage
5. Demonstrate the writing of an arson immunity letter

**STANDARD:**

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

REFERENCE RESOURCES

- ☐ Forensic Fire Scene Reconstruction, David Icove and John DeHaan, Pearson Prentice Hall
- ☐ Kirk's Fire Investigation, John DeHaan, Pearson Prentice Hall
- ☐ NFPA 921: Guide to Fire and Explosive Investigations, NFPA

**#29. Describe The Resources That Are Available To The Fire Investigator**

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Section 4.6.3

LEVEL: II

PERFORMANCE GOAL***GIVEN:***

1. A summary of the resources available to the fire investigator
2. A summary of the sources of information available to the fire investigator
3. A summary of the information found involving criminal history
4. A summary of the information services available to the fire investigator

***PERFORMANCE:***

1. Describe the resources available for the fire investigator
2. Describe the sources of information available for the fire investigator
3. Describe the information found in a criminal history of an individual
4. Describe the information services available to the fire investigator

***STANDARD:***

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy.

REFERENCE RESOURCES

- ☐ NFPA 921: Guide to Fire and Explosive Investigations, NFPA

### #30. Describe The Fire Investigator's Relationships With Other Interested Professionals And Entities

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Sections 4.1.4 and 4.7.4

LEVEL: II

#### PERFORMANCE GOAL

##### ***GIVEN:***

1. A summary of the professional entities that an investigator should liaison and maintain contact with
2. A summary of conducting public informational presentations appropriate to the target audience

##### ***PERFORMANCE:***

1. Describe the professional entities that an investigator should liaison and maintain contact with
2. Describe conducting public informational presentations appropriate to the target audience

##### ***STANDARD:***

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

**FINAL DRAFT**

#### REFERENCE RESOURCES

- ☐ NFPA 921: Guide to Fire and Explosive Investigations, NFPA

### #31. Describe The Effects Building Construction And Components Have On Fire Development And Growth

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Sections 4.2.2, 4.2.3, 4.2.5, and 4.2.9

LEVEL: II

#### PERFORMANCE GOAL

##### ***GIVEN:***

1. A summary of the importance of reviewing construction drawings
2. A summary of the different types of construction drawing views
3. A summary of building types and their classifications
4. A summary of building construction/components/systems that effect fire spread
5. A summary of use of experts to identify complicated electrical and mechanical systems

##### ***PERFORMANCE:***

1. Describe the importance of reviewing construction drawings
2. Describe the different types of construction drawing
3. Describe the different types of building types and their classifications
4. Describe the building construction/components/systems that effect fire spread
5. Describe the use of experts to identify complicated electrical and mechanical systems

##### ***STANDARD:***

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

#### REFERENCE RESOURCES

- ☐ Fire Protection Handbook, NFPA
- ☐ Forensic Fire Scene Reconstruction, David Icove and John DeHaan, Pearson Prentice Hall
- ☐ Kirk's Fire Investigation, John DeHaan, Pearson Prentice Hall
- ☐ NFPA 921: Guide to Fire and Explosive Investigations, NFPA



## #32. Describe The Types, Classification, And Effects Of Explosives And Improvised Explosive Devices

AUTHORITY: State Fire Marshal

LEVEL: II

### PERFORMANCE GOAL

#### **GIVEN:**

1. A summary of the definition of an explosion
2. A summary of the different types of explosions
3. A summary of the nature of explosions
4. A summary of the effects of an explosion
5. A summary of the definition of an explosive train
6. A summary of the different types of explosives
7. A summary of the definition of an improvised explosive device

#### **PERFORMANCE:**

1. Define an explosion
2. Describe the different types of explosives
3. Define the nature of explosions
4. Describe the different effects of an explosion
5. Define the components of an explosive train
6. Describe the different types of explosives
7. Define the components of an improvised explosive device

#### **STANDARD:**

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

### REFERENCE RESOURCES

- ☐ Kirk's Fire Investigation, John DeHaan, Pearson Prentice Hall
- ☐ NFPA 921: Guide to Fire and Explosive Investigations, NFPA

**FIRE-ARSON INVESTIGATOR****#1. Describe The Application Of Search And Seizure Laws To Fire Scene Investigation**

AUTHORITY: State Fire Marshal

LEVEL: II

PERFORMANCE GOAL

**GIVEN:**

1. A summary of the Fourth Amendment to the United States Constitution
2. A summary of the Exclusionary Rule of Evidence
3. A summary of the California Penal Code Section 1538.5
4. A summary of the legal requirements relating to obtaining consent to enter a fire scene in order to conduct an investigation
5. A summary of the description and use of exigent circumstances to enter a fire scene
6. A summary of the description and use of the inspection (administrative) warrant

**PERFORMANCE:**

1. Describe the Fourth Amendment to the U.S. Constitution and its application to fire scene investigation
2. Describe the exclusionary rule and 1538.5 PC
3. Describe expectation of privacy
4. Describe consent as an alternative to the search warrant requirement
5. Describe exigent circumstances as an alternative to the search warrant requirement
6. Describe other alternatives to the search warrant requirement
7. Describe the use of an inspection (administrative) warrant to make entry into a fire scene

**STANDARD:**

By completing all assignments and activities, and passing all written tests and quizzes with a minimum of 80% accuracy

REFERENCE RESOURCES

- ☐ California Code of Civil Procedure, Sections 1822.50 through 1822.57
- ☐ California Penal Code, Section 1538.5
- ☐ California Penal Code, Sections 1523 through 1542
- ☐ NFPA 921: Guide to Fire and Explosive Investigations, NFPA
- ☐ Search Warrant Manual, CDAA

**#2. Describe And Demonstrate Search Warrant Preparation For Fire Scenes**

AUTHORITY: State Fire Marshal

LEVEL: II

PERFORMANCE GOAL

**GIVEN:**

1. A summary of the definition of a search warrant
2. A summary of the statutory grounds for issuance of a search warrant
3. A summary of the legal requirements for describing the location, person, and vehicle to be searched
4. A summary of the legal requirements for the description of the property or person to be seized
5. A summary of the legal requirements for a nighttime search
6. A summary of the legal requirements for oral and telephonic search warrants
7. A summary of the legal requirements for preparation of a search warrant
8. A summary of the legal requirements for preparation of a search warrant affidavit
9. A summary of the legal requirements for preparation of a search warrant statement of probable cause
10. A summary of the legal requirements for preparation of a return of search warrant
11. A summary of the legal requirements of disposal of seized property

**PERFORMANCE:**

1. Describe the definitions of a search warrant; affidavit; return and receipt
2. Describe the statutory grounds for issuance of search warrants
3. Describe the method for describing the location, person, and vehicle to be searched
4. Describe the method for describing the property or person to be seized
5. Describe the statement of probable cause
6. Describe hours of service
7. Describe the requirements for a nighttime search warrant
8. Describe oral and telephonic affidavits
9. Demonstrate the preparation of a search warrant
10. Demonstrate the preparation of an affidavit
11. Demonstrate the preparation of a statement of probable cause
12. Demonstrate the preparation of a return of search warrant
13. Describe and demonstrate the legal disposal of property seized under a search warrant

**STANDARD:**

By completing all operations on a performance test, completing all assignments and activities, passing all written tests and quizzes with a minimum of 80% accuracy

**REFERENCE RESOURCES**

- ☐ California Penal Code, Sections 1523 through 1542
- ☐ NFPA 921: Guide to Fire and Explosive Investigations, NFPA
- ☐ Search Warrant Manual, CDAA

# FINAL DRAFT

### #3. Describe And Demonstrate A Complete Fire Investigation

AUTHORITY: State Fire Marshal

LEVEL: II

#### PERFORMANCE GOAL

##### **GIVEN:**

1. A summary of legal search and seizure issues of a fire scene
2. A summary of fire origin and cause investigation
3. A summary of evidence identification, collection, preservation, and testing
4. A summary of fire scene photography
5. A summary of fire scene sketching and diagramming
6. A summary of scene documentation
7. A summary of sources of information
8. A summary of interviewing witnesses and suspects
9. A summary of case preparation
10. A summary of presentation expert opinion

##### **PERFORMANCE:**

1. Describe and demonstrate legal search and seizure issues of a fire scene
2. Describe and demonstrate fire origin and cause investigation
3. Describe and demonstrate evidence identification, collection, preservation, testing
4. Describe and demonstrate fire scene photography
5. Describe and demonstrate fire scene sketching and diagramming
6. Describe and demonstrate scene documentation
7. Describe and demonstrate sources of information
8. Describe and demonstrate interviewing witnesses and suspects
9. Describe and demonstrate case preparation
10. Describe and demonstrate presentation expert opinion

##### **STANDARD:**

By completing all operations on a performance test, completing all assignments and activities, passing all written tests and quizzes with a minimum of 80% accuracy

#### REFERENCE RESOURCES

- Kirk's Fire Investigation, John DeHaan, Pearson Prentice Hall
- NFPA 921: Guide to Fire and Explosive Investigations, NFPA

#### #4. Describe And Demonstrate Expert Opinion Testimony

AUTHORITY: NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2009):  
Sections 4.7.1, 4.7.2, and 4.7.3

LEVEL: II

##### PERFORMANCE GOAL

##### **GIVEN:**

1. A summary of Federal Rule of Evidence Section 702
2. A summary of the relevant court decisions relating to expert opinion testimony
3. A summary of the use of the curriculum vitae in preparation for expert opinion testimony
4. A summary of the use of the scientific methods and principles in expert opinion testimony
5. A summary of the use of peer review in expert opinion testimony
6. A summary of the use of technical literature in expert opinion testimony
7. A summary of the types of questions used in voir dire examination of the fire origin and cause expert

##### **PERFORMANCE:**

1. Describe and demonstrate the impact of Federal Rule of Evidence, Section 702 on expert opinion in a fire case
2. Describe and demonstrate the impact of case law on expert opinion testimony, which at a minimum *shall* include:
  - Benfield
  - Bitler
  - Daubert
  - Kumho
  - Magnatek
3. Describe and demonstrate the development of a curriculum vitae that will allow for presentation of expert opinion testimony
4. Describe and demonstrate the how scientific methods and principles are applied to expert opinion testimony
5. Describe and demonstrate the use of peer review in expert opinion testimony
6. Describe and demonstrate the use of technical literature in expert opinion testimony
7. Describe and demonstrate the appropriate response needed to answer questions posed during voir dire examination

##### **STANDARD:**

By completing all operations on a performance test, completing all assignments and activities, passing all written tests and quizzes with a minimum of 80% accuracy

##### REFERENCE RESOURCES

- Federal Rule of Evidence, Section 702
- NFPA 921: Guide to Fire and Explosive Investigations, NFPA

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